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| EXAMINER |
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FATEHI, PARHAM R

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| ART UNIT | PAPER NUMBER |
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2194

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
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Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/775,098

Applicant(s)

NISHIMURA, TADAHARU

Examiner

Parham (Paul) R. Fatehi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on _____ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date See Continuation Sheet.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

THOMSON
PATENT EXAMINER
SEP 21 2004

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :2/11/04,8/27/04,6/06/06,6/14/06,9/18/06.

DETAILED ACTION

1. Receipt is acknowledged of applicant's amendment filed 06/24/2005. Claims 1,5-7, 10 have been amended. Claims 1-10 are pending and an action on the merits is as follows.

Information Disclosure Statement

2. The information disclosure statements (IDS) submitted on 02/11/2004, 08/27/2004, 06/06/2006, 06/14/2006 and 09/18/2006 were in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statements are being considered by the examiner.

Specification

3. The abstract of the disclosure is objected to because line 7 recites "no another" and should be changed to "no other". Correction is required. See MPEP § 608.01(b).
4. The disclosure is objected to because of the following informalities: page 7, line 4 recites "every a single message" and should be changed to "every single message"; page 7, line 25 recites "a data retrieving" and should be changed to "a data retrieval"; page 9 line 9 recites "is retrieved" and should be changed to "are retrieved".

Appropriate correction is required.

Claim Objections

5. Claims 1-3 & 5-10 objected to because of the following informalities: Claim 1, line 10 recites, "for requesting for activating the second task" and such language is unclear. Claim 2, line 9 recites, "for requesting for activating the second task" and such language is unclear. Claim 3, line 9 recites, "for requesting for activating the second task" and such language is unclear. Claim 5, line 9 recites, "for requesting for activating the second task" and such

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language is unclear. Claim 6, line 12 recites, "for requesting for activating the second task" and such language is unclear. Claim 7, line 10 recites, "for requesting for activating the second task" and such language is unclear. Claim 8, line 9 recites, "for requesting for activating the second task" and such language is unclear. Claim 9, line 9 recites, "for requesting for activating the second task" and such language is unclear. Claim 10, line 9 recites, "for requesting for activating the second task" and such language is unclear. Suggested correction for Claims 1-3 & 5-10: "for requesting activation of the second task". Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1, 3-7, 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shan (US Patent 5,875,329) in view of Karlak (US 2002/0023175).

As per claim 1, Shan discloses:

An inter-task communications method achieved by execution of a computer, the inter-task communications method where a transmission request occurs, wherein the transmission request is that a data item be sent from a processing of a first task to a processing of a second task (col. 1, ln. 6-11, "a system, method, and computer program for batching messages across processes, nodal boundaries");

executing, when the transmission request occurs, within the processing of the first task, a data queuing so that the data item is stored in a queue from which the

second task can retrieve the data item (col. 2, ln. 55-60, data queuing occurs when messages are transmitted from first sender thread to second thread);

an activation request (col. 5, ln. 27-29, watchdog requests activation of thread)

a data retrieving within the processing of the second task so that the data item stored in the queue is retrieved from the queue (col. 2, ln. 58-60, system comprising a sending queue for receiving messages from threads in the first address space bound for the second address space)

wherein, within the processing of the first task, a frequency of the activation request is provided for being less than a frequency of the data queuing (col. 5, ln. 22-25, "watchdog is given CPU access at intervals that are relatively long compared to sending of messages")

wherein, within the data retrieving within the processing of the second task, more than one data item is retrieved from the queue (col. 5, ln. 53-54 & 57-58, multiple data items are retrieved from queue by the second the thread).

Shan does not explicitly disclose:

outputting to an operating system for requesting for activating the second task and executing, when the second task is activated by a processing of the operating system based on the activation request

On the other hand, Karlak discloses a method of outputting activation requests to an operating system for activating and executing the second task (Par. 17, ln. 11-12, agent determines activation request for indicating second task & Par. 117, ln. 1, where indicator can be the Operating System). Karlak teaches that outputting activation requests to an Operating System for multiple destination tasks associated with a process decreases the complexity required of a centralized management arrangement. Therefore it would have been obvious to

one having ordinary skill in the art at the time the invention was made to combine the teachings of the cited references, wherein the method of inter-task communications of Shan would incorporate the system of outputting activation requests to an operating system for activating the second task as disclosed by Karlak in order to decrease the complexity required of a centralized management arrangement.

As per claim 3, Shan discloses:

An inter-task communications method achieved by execution of a computer, the inter-task communications method where a transmission request occurs, wherein the transmission request is that a data item be sent from a processing of a first task to a processing of a second task (col. 1, ln. 6-11, "a system, method, and computer program for batching messages across processes, nodal boundaries");

executing, when the transmission request occurs, within the processing of the first task, a data queuing so that the data item is stored in a queue from which the second task can retrieve the data item (col. 2, ln. 55-60, data queuing occurs when messages are transmitted from first sender thread to second thread);

a data retrieving within the processing of the second task so that the data item stored in the queue is retrieved from the queue (col. 2, ln. 58-60, system comprising a sending queue for receiving messages from threads in the first address space bound for the second address space)

wherein, within the data retrieving within the processing of the second task, all data items that can be retrieved from the queue is retrieved from the queue (col. 5, ln. 53-58, second task can retrieve all possible items from queue)

Shan does not explicitly disclose:

outputting to an operating system for requesting for activating the second task; and executing, when the second task is activated by a processing of the operating system based on the activation request, wherein, when a transmission request occurs, it is determined whether a given activation request for requesting for activating the second task is present in the operating system wherein, when the given activation request is present in the operating system, no given activation request for requesting for activating the second task is then outputted, wherein, when no given activation request is present in the operating system, the given activation request for requesting for activating the second task is then outputted

On the other hand, Karlak discloses a method of outputting activation requests to an operating system for activating and executing the second task (Par. 17, ln. 11-12, agent determines activation request for indicating second task & Par. 117, ln. 1, where indicator can be the Operating System), wherein when a transmission request occurs it is determined whether activation request for second task is present in operating system and if so no request for activating second test is outputted but if an activation request is not present in the operating system then the request is outputted (Par. 119, ln. 1-7). Karlak teaches that outputting activation requests to an Operating System for multiple destination tasks associated with a process decreases the complexity required of a centralized management arrangement. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the teachings of the cited references, wherein the method of inter-task communications of Shan would incorporate the system of outputting activation requests to an operating system for activating the second task as disclosed by Karlak in order to decrease the complexity required of a centralized management arrangement.

As per claim 4, the invention by Shan, as modified by Karlak, discloses all of the claimed limitations from above but fails to explicitly disclose:

wherein the second task is one of a plurality of tasks that individually have different priority levels wherein the queue is provided for each of the priority levels, wherein the operating system includes task specifying information that specifies a task, wherein an activation request for activating the task specified by the specifying information is already outputted to the operating system and activating the task specified by the specifying information is yet to be executed, and wherein the operating system activates, in a descending order of the priority levels, the tasks specified by the task specifying information.

On the other hand, Karlak discloses a method of inter-task communications wherein the second task is one of a plurality of tasks that individually have different priority levels wherein the queue I provided for each of the priority levels (Par. 17, ln. 5-7, "multiple subtasks desired destination" & Par. 116, ln. 7-10, priority levels), wherein the operating system includes task specifying information that specifies a task (Par. 117, ln. 1, operating system), wherein an activation request for activating the task specified by the specifying information is already outputted to the operating system and activating the task specified by the specifying information is yet to be executed (Par. 17, ln. 5-6 & 11-12, agent determines request for second task for execution, Par. 117, ln. 1, where agent can be in form of operating system), and where operating system can activate the tasks specified by the task specifying information in any arbitrary order of the priority levels (Par. 159, ln. 4-7). Karlak teaches that outputting activation requests to an Operating System for multiple destination tasks associated with a process decreases the complexity required of a centralized management arrangement. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was

made to combine the teachings of the cited references, wherein the method of inter-task communications of Shan would incorporate the system of outputting activation requests to an operating system for activating the second task as disclosed by Karlak, in order to decrease the complexity required of a centralized management arrangement.

As per claim 5, Shan discloses:

A program executed by a computer for achieving an inter-task communications where a transmission request occurs, wherein the transmission request is that a data item be sent from a processing of a first task to a processing of a second task (col. 1, ln. 6-11, "a system, method, and computer program for batching messages across processes, nodal boundaries");

executing, when the transmission request occurs, within the processing of the first task, a data queuing so that the data item is stored in a queue from which the second task can retrieve the data item (col. 2, ln. 55-60, data queuing occurs when messages are transmitted from first sender thread to second thread);

a data retrieving within the processing of the second task so that the data item stored in the queue is retrieved from the queue (col. 2, ln. 58-60, system comprising a sending queue for receiving messages from threads in the first address space bound for the second address space)

wherein, within the processing of the first task, a frequency of the activation request is provided for being less than a frequency of the data queuing (col. 5, ln. 22-25, "watchdog is given CPU access at intervals that are relatively long compared to sending of messages")

and, wherein, within the data retrieving within the processing of the second task, more than one data item is retrieved from the queue (col. 5, ln. 53-54 & 57-58, multiple data items are retrieved from queue by the second the thread).

Shan does not explicitly disclose:

outputting an activation request to an operating system for requesting for activating the second task and executing, when the second task is activated by a processing of the operating system based on the activation request.

On the other hand, Karlak discloses a method of outputting activation requests to an operating system for activating and executing the second task (Par. 17, ln. 11-12, agent determines activation request for indicating second task & Par. 117, ln. 1, where indicator can be the Operating System). Karlak teaches that outputting activation requests to an Operating System for multiple destination tasks associated with a process decreases the complexity required of a centralized management arrangement. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the teachings of the cited references, wherein the method of inter-task communications of Shan would incorporate the system of outputting activation requests to an operating system for activating the second task as disclosed by Karlak, in order to decrease the complexity required of a centralized management arrangement.

As per claim 6, Shan discloses:

An electronic device achieving an inter-task communications where a transmission request occurs, wherein the transmission request is that a data item be sent from a processing of a first task to a processing of a second task the electronic device comprising: a computer; and a program executed by the computer, (col. 1, ln. 6-11,

“a system, method, and computer program for batching messages across processes, nodal boundaries”);

wherein the program includes steps of:

executing, when the transmission request occurs, within the processing of the first task, a data queuing so that the data item is stored in a queue from which the second task can retrieve the data item (col. 2, ln. 55-60, data queuing occurs when messages are transmitted from first sender thread to second thread);

a data retrieving within the processing of the second task so that the data item stored in the queue is retrieved from the queue (col. 2, ln. 58-60, system comprising a sending queue for receiving messages from threads in the first address space bound for the second address space)

wherein, within the processing of the first task, a frequency of the activation request is provided for being less than a frequency of the data queuing (col. 5, ln. 22-25, “watchdog is given CPU access at intervals that are relatively long compared to sending of messages”) and wherein, within the data retrieving within the processing of the second task, more than one data item is retrieved from the queue (col. 5, ln. 53-54 & 57-58, multiple data items are retrieved from queue by the second the thread).

Shan does not explicitly disclose:

outputting an activation request to an operating system for requesting for activating the second task; and executing, when the second task is activated by a processing of the operating system based on the activation request.

On the other hand, Karlak discloses a method of outputting activation requests to an operating system for activating and executing the second task (Par. 17, ln. 11-12, agent determines activation request for indicating second task & Par. 117, ln. 1, where indicator can

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be the Operating System). Karlak teaches that outputting activation requests to an Operating System for multiple destination tasks associated with a process decreases the complexity required of a centralized management arrangement. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the teachings of the cited references, wherein the method of inter-task communications of Shan would incorporate the system of outputting activation requests to an operating system for activating the second task as disclosed by Karlak, in order to decrease the complexity required of a centralized management arrangement.

As per claim 7, Shan discloses:

A computer program product on a computer readable medium for use in an inter-task communications where a transmission request occurs wherein the transmission request is that a data item be sent from a processing of a first task to a processing of a second task (col. 1, ln. 6-11, "a system, method, and computer program for batching messages across processes, nodal boundaries");

the computer program product comprising instructions of:

executing, when the transmission request occurs, within the processing of the first task, a data queuing so that the data item is stored in a queue from which the second task can retrieve the data item (col. 2, ln. 55-60, data queuing occurs when messages are transmitted from first sender thread to second thread);

a data retrieving within the processing of the second task so that the data item stored in the queue is retrieved from the queue (col. 2, ln. 58-60, system comprising a sending queue for receiving messages from threads in the first address space bound for the second address space);

wherein, within the processing of the first task, a frequency of the activation request is provided for being less than a frequency of the data queuing (col. 5, ln. 22-25, "watchdog is given CPU access at intervals that are relatively long compared to sending of messages"),

and wherein, within the data retrieving within the processing of the second task, more than one data item is retrieved from the queue (col. 5, ln. 53-54 & 57-58, multiple data items are retrieved from queue by the second the thread).

Shan does not explicitly disclose:

outputting an activation request to an operating system for requesting for activating the second task; and executing, when the second task is activated by a processing of the operating system based on the activation request.

On the other hand, Karlak discloses a method of outputting activation requests to an operating system for activating and executing the second task (Par. 17, ln. 11-12, agent determines activation request for indicating second task & Par. 117, ln. 1, where indicator can be the Operating System). Karlak teaches that outputting activation requests to an Operating System for multiple destination tasks associated with a process decreases the complexity required of a centralized management arrangement. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the teachings of the cited references, wherein the method of inter-task communications of Shan would incorporate the system of outputting activation requests to an operating system for activating the second task as disclosed by Karlak, in order to decrease the complexity required of a centralized management arrangement.

As per claim 9, it is a system claim with same limitations as the method in claim 3 and is therefore rejected under the same reasons.

As per claim 10, Shan discloses:

An inter-task communications device including a computer, the inter-task communications device where a transmission request occurs, wherein the transmission request is that a data item be sent from a processing of a first task to a processing of a second task, the inter-task communications device comprising (col. 1, ln. 6-11, "a system, method, and computer program for batching messages across processes, nodal boundaries");

data queuing means for executing, when the transmission request occurs, within the processing of the first task, a data queuing so that the data item is stored in a queue from which the second task can retrieve the data item (col. 2, ln. 55-60, data queuing occurs when messages are transmitted from first sender thread to second thread, a data queuing means for executing);

a data retrieving within the processing of the second task so that the data item stored in the queue is retrieved from the queue (col. 2, ln. 58-60, system comprising a sending queue for receiving messages from threads in the first address space bound for the second address space),

wherein, within the processing of the first task, a frequency of the activation request is provided for being less than a frequency of the data queuing (col. 5, ln. 22-25, "watchdog is given CPU access at intervals that are relatively long compared to sending of messages"), and

wherein, within the data retrieving within the processing of the second task, more than one data item is retrieved from the queue (col. 5, ln. 53-54 & 57-58, multiple data items are retrieved from queue by the second the thread).

Shan does not explicitly disclose:

activation requesting means for outputting an activation request to an operating system for requesting for activating the second task; and data retrieving means for executing, when the second task is activated by a processing of the operating system based on the activation request.

On the other hand, Karlak discloses a method of outputting activation requests to an operating system for activating and executing the second task (Par. 17, ln. 11-12, agent determines activation request for indicating second task & Par. 117, ln. 1, where indicator can be the Operating System). Karlak teaches that outputting activation requests to an Operating System for multiple destination tasks associated with a process decreases the complexity required of a centralized management arrangement. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the teachings of the cited references, wherein the method of inter-task communications of Shan would incorporate the system of outputting activation requests to an operating system for activating the second task as disclosed by Karlak, in order to decrease the complexity required of a centralized management arrangement.

Claims 2 & 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shan in view of Karlak, and further in view of Gilbert (US 7,137,122).

As per claim 2, Shan and Karlak substantially disclose the invention as claimed.

In addition, Karlak discloses:

wherein, when no certain data item is being already stored before the given data item is to be stored, an activation request is then outputted (Par. 17, ln. 11-15, when no data is already at head of queue item is stored)

And Shan discloses:

wherein, within the data retrieving within the processing of the second task, all data items that can be retrieved from the queue is retrieved from the queue (col. 5, ln. 53-54, if it not empty processing returns until empty)

Shan and Karlak do not explicitly disclose:

wherein, when a transmission request that a given data item be sent occurs, it is determined whether the queue stores a certain data item that is being already stored before the given data item is to be stored,

wherein, when the certain data item is being already stored before the given data item is to be stored, no activation request is then outputted,

However, Gilbert in an analogous art discloses:

wherein, when a transmission request that a given data item be sent occurs, it is determined whether the queue stores a certain data item that is being already stored before the given data item is to be stored wherein, when the certain data item is being already stored before the given data item is to be stored, no activation request is then outputted (col. 2, ln. 52-56, determining whether queue should store data). Therefore, in view of Gilbert, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of the cited references. The motivation for including a system that determines whether a certain data item is being already stored and basing an activation request on that result is found in the teachings of Gilbert in that Gilbert teaches that such a determination would result in there being fewer output message in total and results in faster and more efficient inter-task management process.

As per claim 8, it is a system claim with the same limitations as the method in claim 2 and is rejected under the same reasons.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Parham (Paul) R. Fatehi whose telephone number is 571-272-1407. The examiner can normally be reached on M-Th 7:30AM-5PM EST, off alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chameli Das can be reached on (571)272-3696. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Paul Fatehi
Examiner
AU 2109

P. Fatehi 02/09/07

William Thomson
WILLIAM THOMSON
SENIOR PATENT EXAMINER
TECHNOLOGY CENTER 2100